

WHAT IS CLAIMED IS:

1. A refractory building structure, comprising:

a regeneration layer; and

at least one non-metallic fiber layer mounted in the regeneration

5 layer; wherein:

the regeneration layer is coated on an outside of the non-metallic
fiber layer;

the regeneration layer includes cement, mineral waste and adhesive.

2. The refractory building structure in accordance with claim 1,

10 wherein the mineral waste includes coal ashes, coal cinder, slag, incinerated
cinder, mud ashes, reaction ashes, dust ashes, waste porcelain clay and waste
casting sand.

3. The refractory building structure in accordance with claim 1,

wherein the adhesive is a hydrophilic adhesive.

15 4. The refractory building structure in accordance with claim 1,

wherein the adhesive is a white shellac resin.

5. The refractory building structure in accordance with claim 1,

wherein the regeneration layer further includes a chemical agent.

6. The refractory building structure in accordance with claim 5,

20 wherein the chemical agent is a dehydrating agent.

7. The refractory building structure in accordance with claim 5,

wherein the chemical agent is a plasticizer.

8. The refractory building structure in accordance with claim 5, wherein the chemical agent is a strengthening additive.

9. The refractory building structure in accordance with claim 1, wherein the non-metallic fiber layer is a non-woven fabric.

5 10. The refractory building structure in accordance with claim 1, wherein the refractory building structure comprises a plurality of non-metallic fiber layers mounted in the regeneration layer.

11. The refractory building structure in accordance with claim 10, wherein the non-metallic fiber layers are arranged in a parallel manner.

10 12. The refractory building structure in accordance with claim 1, wherein the regeneration layer is combined with the non-metallic fiber layer to form a sheet plate.

13. The refractory building structure in accordance with claim 1, wherein the regeneration layer is combined with the non-metallic fiber layer to
15 form a substantially semi-cylindrical plate.

14. The refractory building structure in accordance with claim 1, wherein the regeneration layer is combined with the non-metallic fiber layer to form a substantially tubular structure.